IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 22, 26, 33, 39, 40, 41, 44 and 50 and CANCEL claim 4 without prejudice or disclaimer in accordance with the following:

1.   (currently amended) A popularity degree calculation method for calculating a popularity degree indicating the height of a popularity of a document in a network via an apparatus connected with the network, the method comprising:

extracting documents updated or collected during a first time period; ~~and~~

calculating the popularity degree for one of the extracted documents based on a number of link relations of said particular one referencing to the other extracted documents and of said particular one referenced by the other extracted documents during the first time period; and

calculating a popularity transition degree indicating both a direction and a degree of transition of the popularity degree for each of the extracted documents during the first time period.

2.   (original) The popularity degree calculation method according to claim 1, wherein the popularity degree is calculated based on both a link relation of each of the extracted documents and document location information indicating a location in the network of each of the documents.

3.   (original) The popularity degree calculation method according to claim 2, wherein the popularity degree is calculated based on features of a character string describing the document location information.

4.   (cancelled)

5.   (original) The popularity degree calculation method according to claim 4, wherein the popularity transition degree is calculated based on a popularity degree calculated during a second time period.

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6. (original) The popularity degree calculation method according to claim 4, further comprising:

calculating a regression equation against a time of the popularity degree calculated during the second time period,

wherein the popularity transition degree is calculated according to the regression equation.

7. (original) The popularity degree calculation method according to claim 6, wherein the popularity transition degree is calculated based on a regression coefficient of the regression equation.

8. (original) The popularity degree calculation method according to claim 7, further comprising:

determining transition tendency against the time of the popularity degree, based on an intercept of the regression equation.

9. (original) The popularity degree calculation method according to claim 4, further comprising:

determining an order of each document in the extracted documents, based on the popularity degree calculated during the second time period; and

calculating a regression equation against a time of the order during the second time period,

wherein the popularity transition degree is calculated based on the regression equation.

10. (previously presented) A document relation judgment method for judging a relation between documents in a network via an apparatus connected with the network, the method comprising:

extracting a link relation from a first document;

extracting a predetermined character string which links a second document in the first document, from the first document; and

judging whether the second document is a non-text document related to contents of the first document.

11.   (previously presented) The document relation judgment method according to claim 10, further comprising:

extracting the predetermined character string located in a vicinity of a part which the first document is linking to the second document, from the first document,

wherein it is judged whether the second document is the non-text document related to the contents of the first document, based on the predetermined character string.

12.   (previously presented) The document relation judgment method according to claim 11, wherein when the predetermined character string includes a specific character string, it is determined that the second document is the non-text document related to the contents of the first document.

13.   (original) The document relation judgment method according to claim 10, wherein it is judged whether the second document is the non-text document related to the contents of the first document, based on an extension of a file name of the second document.

14.   (original) The document relation judgment method according to claim 13, wherein if the extension is not a specific extension, it is determined that the second document is not the non-text document related to the contents of the first document.

15.   (original) The document relation judgment method according to claim 10, wherein it is judged whether the second document is the non-text document related to the contents of the first document, based on whether the second document is used a prescribed number of times or more in the first document.

16.   (original) The document relation judgment method according to claim 15, wherein if the second document is used the prescribed number of times or more in the first document, it is determined that the second document is not the non-text document related to the contents of the first document.

17.   (original) The document relation judgment method according to claim 15, wherein if the second document is used less than the prescribed number of times in the first document, it is determined that the second document is the non-text document related to the contents of the first document.

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18.   (previously presented) The document relation judgment method according to claim 10, further comprising:

not registering the second document in a database as the non-text document related to the contents of the first document, when the first document includes a third document with a file name similar to a file name of the second document and when the file name of the second document is ranked lower than the file name of the third document in a dictionary order.

19.   (original) The document relation judgment method according to claim 10, further comprising

judging, if there is a fourth document linked to by the second document, whether the second document is the non-text document related to the contents of the first document, based on both document location information about the first document indicating location in the network of the document and document location information about the second document.

20.   (original) The document relation judgment method according to claim 19, wherein it is judged whether the second document is the non-text document related to the contents of the first document, based on both the document location information about the first document and document location information about the fourth document.

21.   (original) The document relation judgment method according to claim 10, wherein if a fifth document is linked to by the second document and if a server address or a domain in each of the document location information about the second document indicating location in the network of the document and document location information about the fifth document is different from a server address or a domain in document location information about the first document, it is determined that the second document is not the non-text document related to the contents of the first document.

22.   (currently amended) A service type judgment method for judging a type of a service provided by a document in a network via an apparatus connected with the network, the method comprising:

extracting documents updated or collected during a first time period;

calculating the popularity degree for one of the extracted documents based on a number of link relations of said particular one referencing to the other extracted documents

and of said particular one referenced by the other extracted documents during the first time period;

calculating a popularity transition degree indicating both a direction and a degree of transition of the popularity degree for each of the extracted documents during the first time period;

extracting a tag that is contained in said particular one of the extracted documents and designates user input; and

judging the type of the service provided by said particular document, based on the tag that designates user input.

23.   (original) The service type judgment method according to claim 22, further comprising:

determining that the document provides no service, if the document includes no tag designating user input.

24.   (original) The service type judgment method according to claim 22, wherein the service type provided by the document is judged based on the description of a button included in the document.

25.   (original) The service type judgment method according to claim 22, wherein the service type provided by the document is judged based on a user input area included in the document.

26.   (currently amended) A computer-readable storage medium that stores a program for enabling a computer to calculate a popularity degree indicating the height of a popularity of a document in a network, the process comprising:

extracting documents updated or collected during a first time period; and

calculating the popularity degree for one of the extracted documents based on a number of link relations of said particular one referencing to the other extracted documents and of said particular one referenced by the other extracted documents during the first time period; and

calculating a popularity transition degree indicating both a direction and a degree of transition of the popularity degree for each of the extracted documents during the first time period.

27.   (original) The storage medium that stores a program for enabling the computer to execute a process according to claim 26, the process further comprising:

calculating a popularity transition degree for indicating both a direction and a degree of the popularity degree of the document, based on the popularity degree calculated during a second time period.

28.   (previously presented) The storage medium that stores a program for enabling the computer to execute a process according to claim 26, the process further comprising:

calculating a regression equation against the time of the popularity degree calculated during a second time period; and

calculating the popularity transition degree for indicating both a direction and a degree of transition of the popularity degree of the document, based on the regression equation.

29.   (original) The storage medium that stores a program for enabling the computer to execute a process according to claim 28, wherein the popularity transition degree is determined based on a regression coefficient of the regression equation.

30.   (original) The storage medium that stores a program for enabling the computer to execute a process according to claim 28, further comprising:

determining a tendency of transition against the time of the popularity degree, based on the regression equation.

31.   (original) A computer-readable storage medium that stores a program for enabling a computer to judge a relation between documents in a network, the process comprising:

extracting a link relation from a first document; and

judging whether a second document linked to by the first document is non-text content related to the contents of the first document, based on the link relation.

32.   (original) A computer-readable storage medium that stores a program for enabling a computer to judge a type of a service provided by a document in a network, the process comprising:

extracting a tag for designating user input from the document; and

judging the type of the service provided by the document, based on the tag designating

user input.

33.   (currently amended) A document retrieval method for searching for a document in a network via an apparatus connected with the network, the method comprising:

collecting documents from the network;

extracting documents updated or collected during a first time period;

calculating a popularity degree indicating the height of a popularity of one of the extracted documents based on a number of link relations of said particular one referencing to the other extracted documents and of said particular one referenced by the other extracted documents during the first time period;

calculating a popularity transition degree indicating both a direction and a degree of transition of the popularity degree for each of the extracted documents during the first time period;

retrieving the document meeting retrieval conditions from the collected documents, based on the retrieval conditions;

ranking the retrieved documents, based on the popularity degree; and

outputting information about the retrieved documents, based on the ranking result.

34.   (original) The document retrieval method according to claim 33, further comprising:

calculating a popularity transition degree for indicating both a direction and a degree of the transition of the popularity degree for the document; and

adding information about the popularity transition degree to information about the retrieved documents.

35.   (original) The document retrieval method according to claim 33, further comprising:

judging whether another document linked to by the document is a non-text document related to the contents of the document, based on the link relation; and

adding the information about the related non-text document to the information about the retrieved documents.

36.   (original) The document retrieval method according to claim 35, further comprising:

embedding the information about the related non-text document into the related non-text document.

37.   (original) The document retrieval method according to claim 33, further comprising:

extracting a tag designating user input from the document;

judging a type of a service provided by the document, based on the tag designating user input; and

adding the information about the service type to the information about the retrieved documents.

38.   (previously presented) The document retrieval method according to claim 33, further comprising:

receiving from a user registration of both document location information indicating location in the network of a specific document and a value; and

notifying the user of the fact that a popularity degree has reached the value, when the popularity degree for the document specified by the document location information has reached the value.

39.   (currently amended) A document retrieval apparatus for searching for a document in a network via an apparatus connected with the network, comprising:

a collection unit collecting documents from the network;

a popularity degree calculation unit extracting documents updated or collected during a first time period as calculation targets of a popularity degree indicating the height of a popularity and calculating the popularity degree of each of the extracted documents updated or collected during the first time period, and calculating a popularity transition degree indicating both a direction and a degree of transition of the popularity degree for each of the extracted documents during the first time period; and

a retrieval service unit retrieving a document meeting retrieval conditions from the collected documents, based on the retrieval conditions, ranking the retrieved documents, based on the popularity degree and outputting information about the retrieved documents, based on the ranking result.

40.   (currently amended) An area information document retrieval apparatus

connected with a network for searching for documents about an area in the network, comprising:

a collection unit collecting documents from the network and extracting a link relation from each of the collected documents;

a popularity degree calculation unit extracting documents updated or collected during a first time period as calculation targets of a popularity degree indicating the height of a popularity and calculating the popularity degree of each of the extracted documents updated or collected during the first time period, and calculating a popularity transition degree indicating both a direction and a degree of transition of the popularity degree for each of the extracted documents during the first time period;

a popularity degree transition calculation unit calculating a popularity transition degree for indicating both a direction and a degree of transition of the popularity degree, based on the popularity degree calculated during a second time period;

a related non-text contents judgment unit judging whether a document linked to by each collected document is a non-text document related to the contents of each collected document, based on a link relation between the collected documents;

a service type judgment unit extracting a tag for designating user input from each of the collected documents and judging a type of a service provided by the document, based on the tag for designating user input;

a sorting unit hierarchically sorting the collected documents for each area; and

a retrieval service unit searching for the documents sorted for each of the area names, based on an area name designated by a user, ranking the retrieved documents, based on the popularity degree and outputting information about the popularity transition degree of the retrieved documents, information about the related non-text document and information about a service type provided by the retrieved documents, based on the ranking result, in addition to information about the content of the retrieved documents.

41.   (currently amended) A computer data signal embodied in a carrier wave, for expressing a program for enabling a computer connected with a network to calculate a popularity degree indicating the height of a popularity of a document in the network, the process comprising:

extracting documents updated or collected during a first time period; and

calculating the popularity degree of each of the extracted documents updated or collected during the first time period; and

calculating a popularity transition degree indicating both a direction and a degree of

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transition of the popularity degree for each of the extracted documents during the first time period.

42.   (previously presented) A computer data signal embodied in a carrier wave, for expressing a program for enabling a computer connected with a network to judge a relation between documents in the network, the process comprising:

extracting a link relation from a first document; and

judging whether a second document linked to by the first document is a non-text document related to contents of the first document, based on the link relation.

43.   (previously presented) A computer data signal embodied in a carrier wave, for expressing a program for enabling a computer connected with a network to judge a type of a service provided by a document in the network, the process comprising:

extracting a tag for designating user input from the document; and

judging the type of the service provided by the document, based on the tag designating user input.

44.   (currently amended) A popularity degree calculation method for calculating a popularity degree indicating the height of a popularity of a document in a network via an apparatus connected with the network, the method comprising:

extracting the document updated or collected during a first time period;

calculating the popularity degree for each extracted document updated or collected during the first time period; and

calculating a popularity transition degree indicating both a direction and a degree of transition of the popularity degree for each of the extracted documents during the first time period.

45.   (previously presented) The popularity degree calculation method according to claim 44, wherein the popularity transition degree is calculated based on a popularity degree calculated during a second time period.

46.   (previously presented) The popularity degree calculation method according to claim 44, further comprising:

calculating a regression equation against a time of the popularity degree calculated during the second time period,

wherein the popularity transition degree is calculated according to the regression

equation.

47.   (previously presented) The popularity degree calculation method according to claim 46, wherein the popularity transition degree is calculated based on a regression coefficient of the regression equation.

48.   (previously presented) The popularity degree calculation method according to claim 47, further comprising:

' determining transition tendency against the time of the popularity degree, based on an intercept of the regression equation.

49.   (previously presented) The popularity degree calculation method according to claim 44, further comprising:

determining an order of each document in the extracted documents, based on the popularity degree calculated during the second time period; and

calculating a regression equation against a time of the order during the second time period, wherein the popularity transition degree is calculated based on the regression equation.

50.   (currently amended) A computer-readable storage medium that stores a program for enabling the computer to calculate a popularity degree indicating the height of a popularity of a document in a network, the process comprising:

extracting the document updated or collected during a first time period;

calculating the popularity degree for the extracted document updated or collected during the first time period; and

calculating a popularity transition degree for indicating both a direction and a degree of the popularity degree of the document, based on the popularity degree calculated during a second time period.

51.   (previously presented) A computer-readable storage medium that stores a program for enabling the computer to calculate a popularity degree indicating the height of a popularity of a document in a network, the process comprising:

extracting the document updated or collected during a first time period;

calculating the popularity degree for the extracted document;

calculating a regression equation against the time of the popularity degree calculated during a second time period; and

calculating the popularity transition degree for indicating both a direction and a degree of transition of the popularity degree of the document, based on the regression equation.

52.   (previously presented) The storage medium that stores a program for enabling the computer to execute a process according to claim 51, wherein the popularity transition degree is determined based on a regression coefficient of the regression equation.

53.   (previously presented) The storage medium that stores a program for enabling the computer to execute a process according to claim 51, further comprising:

determining a tendency of transition against the time of the popularity degree, based on the regression equation.

54.   (previously presented) A document retrieval method for searching for a document in a network via an apparatus connected with the network, the method comprising:

collecting documents from a network;

extracting documents updated or collected during a first time period;

calculating a popularity degree indicating the height of a popularity of each of the extracted documents;

retrieving the document meeting retrieval conditions from the collected documents, based on the retrieval conditions;

ranking the retrieved documents, based on the popularity degree;

outputting information about the retrieved documents, based on the ranking result;

receiving from a user registration of both document location information indicating location in the network of a specific document and a value; and

notifying the user of the fact that a popularity degree has reached the value, when the popularity degree for the document specified by the document location information has reached the value.